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OBSERVATIONS
ON THE
SUPERIOR EFFICACY
OF THE
RED PERUVIAN BARK;
IN THE
CURE of AGUES and other FEVERS.

Interpersed with OCCASIONAL REMARKS on the
TREATMENT of other DISEASES, by the same
REMEDY.

By WILLIAM SAUNDERS, M. D.
Member of the Royal College of Physicians in LONDON,
and Physician to Guy's Hospital.

ÆQUE PAUPERIBUS PRODEST, LOCUPLETIBUS ÆQUE.
HORATIUS.

L O N D O N :

Printed for J. JOHNSON, St. Paul's Church Yard, and
J. MURRAY, Fleet Street,

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NAVY

NAVY

TO
ROBERT THOMLINSON, M. D.
JAMES HERVEY, M. D.

FELLOWS of the ROYAL COLLEGE, and PHYSICIANS of
GUY'S HOSPITAL.

MR. JOSEPH WARNER, F. R. S.

MR. JAMES FRANK,

MR. WILLIAM LUCAS,

SURGEONS of GUY'S HOSPITAL.

GENTLEMEN,

PERMIT me to dedicate these Observations to you, as a Mark of my sincere Esteem, and high Opinion of your PROFESSIONAL CHARACTERS.

I have the Honour to be,

GENTLEMEN,

Your most obedient,

Humble Servant,

W. SAUNDERS.

Jeffries Square,
July 20, 1782.

TO

ROBERT THOMLINSON, M.D.

JAMES HERVEY, M.D.

Fellows of the Royal College, and Physicians of

Guy's Hospital.

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Little Square,
July 20, 1782.

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OF THE

CHINESE MEDICINE

IN THE TREATMENT OF

FEVER

AND

DIARRHOEA

IN THE

INDIAN ARCHipelago

AND

THE

WEST INDIES

TO
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JAMES HERVEY, M. D.

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Jeffries Square,
July 20, 1782.

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Testis Signato,
July 20, 1772.

P R E F A C E.

I HAD long suspected that the *Peruvian Bark* in common use, was very inferior in power and efficacy to that recommended by the early writers on the subject; but, more especially by our countrymen, MORTON and SYDENHAM, in whose works the medical virtues of this Drug, in Intermittent and other Fevers are extolled as little short of infallibility. In their time the Quill Bark was not mentioned; their cotemporary writers on the *Materia Medica*, evidently describe the *Peruvian Bark* of that period, as of a larger kind, of more compact pieces, and of the colour of the rust of Iron, which marks are very expressive of the Red Bark,; the innermost coat of which has an ochry appearance, and its resinous or middle layer resembles very much the *Lapis Hæmatitis*.* M. LA CONDAMINE expressed his surprise,

* *Cortex crassitie mediocri, foras scaber, paululum canescens, aliquando musco obductus, intus lævis, coloris ferruginei, saporis acris at intense amari. Autumno colligitur et cortex circumcirca delibratur, tam Trunci quam ramorum.*

Dalei Pharmacologia, p. 201, Anno 1692.

surprise, when he was told by Mr. THOMAS BLACHYNDEN, Director of the English South Sea Company, at Panama, that the writers on Pharmacy and Materia Medica in England had preferred the Small and Quill Bark, while the inhabitants of New Spain, held the larger Bark in higher estimation.† I can only explain such a preference from this circumstance,
that

Mr. SPRINGALL of *Thames Street*, (whose Uncle was, in the year 1702, with SIR GEORGE ROOKE, at the taking of the *French and Spanish Galleons*, in the harbour of *Vigo* in *Gallicia*) had a quantity of Peruvian Bark, which was part of the plunder brought home at that time. It was bought, about four years ago, by Mr. PEARSON, an Apothecary in *Spital Square*, who assured me that it was the Red Bark: its Decoction was much stronger than that of the Common Bark, and he found it very efficacious in the cure of Fevers and other Diseases. This seems a collateral proof of the Red Bark being early in use.

† They commonly reckon three species of the *Quinquina*, tho' some make four; the white, the yellow, and the red: I was told at *Loxa*, that these three kinds differ in their virtue only; the white having scarce any virtue, and the red excelling the yellow.

The trees from whence the first Bark was taken, which were very large, are all dead, having been entirely stripped, which infallibly kills them when they come to be old. Experience has shewn that stripping kills some of the young ones also, but the greatest part escape. For this operation they use a common knife, which they hold in both hands; the barker sticks it into the Bark as high as he can reach, and so draws it downwards as low as he can. It does not appear that the trees which grow where the old ones stood, have less virtue than they, the situation and soil being the same; the difference, if
there

that the larger pieces of Bark which were imported into this country along with the smaller Bark, were either of a fibrous, spongy, or ligneous texture; or, probably damaged by moisture, and taken from decayed trees.

Druggists have sometimes suggested this as an argument against the use of the present Bark, and many probably endeavour to oppose its introduction, until the quantity in the markets be greater, and more equally divided

A 2

among

there be any, may arise, perhaps, from the different ages of the trees. Few but young ones are now to be met with: I do not remember to have seen any much thicker than my arm, or above 12 or 15 feet high; those which are cut young, shoot forth new branches from the stumps.

I was informed at *Loxa*, that heretofore, they preferred the coarsest Bark, and laid it by as a rarity, but now the finest is most esteemed: the merchants may possibly find their account in it, as it takes up less room in packing. But a director of the *English South Sea Company* at *Panama*, through which all the *Quinquina* that comes to *Europe* must pass, assured me, that the preference given at present to the fine Bark, is in consequence of several chymical analyses and experiments which have been made on both sorts in *England*. It seems probable, that the difficulty of thoroughly drying the large coarse bark, and the humidity it is naturally apt to contract and retain, has helped to bring it into disrepute. Vulgar prejudice will have it, that to lose nothing of its virtue, the tree should be barked in the moon's decrease, and on the east side. These circumstances, as also its being gathered on the mountain of *Cajanuma*, were certified by a notary in 1735, where the marquis de *Castelfuerte* procured a quantity of *Quinquina* from *Loxa*, to carry to *Spain* on his return. *Memoir de l'Acad. d. Sc.* 1738.

among them, or until they have been able to dispose of the large quantity of common Bark they have in their warehouses.

The taste and flavour of the Red Bark is more difficultly evolved, and is therefore at first not so obvious from the closeness of its texture, and from the resinous coat being so well defended and inclosed between other two layers. It is evidently heavier than any other kind of Bark, and seems to have been prepared and dried with greater attention, its original appearance and form being better preserved.

I think it probable from a more attentive view of the subject that it may be the Bark of the trunk of the tree, and I am the more confirmed in this opinion by the ideas of my friends Dr. WITHERING and Dr. FOTHERGILL, conveyed in their letters to me; in which, they observe that the essential and active parts of the Oak Bark are more intire, and in larger quantity in the trunk and larger branches, than in the twigs or smaller branches, which are comparatively of an imperfect growth, perhaps the Small and Quilled Bark may be procured from younger trees not yet arrived at
their

their full maturity and therefore yielding a Bark of a weaker quality.†

If the execution of this work was equal to its importance, it would challenge the attention of the public, in a degree far above most medical subjects. This will be unquestionably admitted by those who have been eye witnesses to the fatality and malignancy of intermittent and remittent Fevers in every part of the globe, but more especially in warm climates; this fatality is by no means owing to the ignorance or unskilfulness of the practitioners in those countries, but to the inefficacy of the Common Bark in general use.

The numbers, who fall a sacrifice to the Epidemic and Seasoning Fevers of warm Climates, are admitted

† Mr. ARROT, a Scotch Surgeon who had gathered the Bark in the place where it grows, says that the small curled Bark so much esteemed in England is the Bark of younger Trees, which frequently recover the Barking, while the older Trees never do. This affords a strong proof that the early Bark introduced into Europe was of the larger kind and from the older Trees, while the difficulty of procuring it, has been the means of introducing a smaller and younger Bark. Mr. ARROT, and all other Travellers agree in preferring the Red Bark to any other.

Encyclopædia, Cortex, Vol. I,

ed infinitely to exceed those who are destroyed by the Enemy. In almost all the dangerous Fevers which occur in our East and West India Settlements, the Bark is a principal Remedy.

I think it therefore an object of the greatest national importance, that our Fleets and Armies should be liberally supplied with this Bark which will seldom or ever disappoint them. I have been told by a Druggist, that its great activity rendered it a dangerous remedy, my answer was that wine mixed with water was much safer in the hands of an unskilful practitioner, than wine alone, but that did not prove that wine was not a better cordial than water. The same reasoning may be applied to prove, that weak and decayed remedies, by being much milder in their operations, are therefore preferable to such as are more perfect of their kind. I believe the general and best founded complaint is against the want of power and efficacy of Bark, and not that it is too powerful and active. In proof of this I refer my Readers to the Letters annexed, which evidently demonstrate that such was the stubbornness and obstinacy of the
Intermittent

Intermittent Fevers of this year, even in this country, that they resisted common Bark, and only gave way to the Red Bark.

Notwithstanding I formed very early a favourable opinion of this Bark, yet it fell far short of that which I am now justified in maintaining from the collected evidence of so many Gentlemen in distant and remote parts of the country. Many letters which I have received are wrote with such zeal in favour of its superior efficacy, that they could only be dictated by the strongest conviction arising from extensive and diligent observations.

I have persuaded many of my Medical friends to use the Red Bark in our foreign settlements, and, I shall take pleasure in communicating to the public the result of their observations so soon as I am favoured with them. A more powerful Bark is particularly desirable in those countries, where the violence and danger of the paroxysm is so great. In the following observations, I have confined myself very much to the use of the Red
Bark

Bark in febrile Diseases, but I am in possession of many facts in proof of its superior powers in other diseases in which the common Peruvian Bark has been found useful.

The public may be always assured of the fidelity of my observations, and that my only motive is that of restoring to general use a remedy which was found so efficacious by MORTON and SYDENHAM, and which in the hands skilful Physicians may be considered as an antidote to the fatal influence of Marshy Grounds and Unhealthy Climates.

INTRO.

INTRODUCTION.

IN the Year 1779, a Spanish Ship from Lima, bound to Cadiz, was taken by the Huffer Frigate, and carried into Lisbon; her cargo consisted chiefly of this Bark, a part of which was afterwards brought into this country, and purchased by several Druggists in London. It is of so large a kind, and has so coarse an appearance, that it was with much difficulty they could prevail on Medical Practitioners to prescribe it. Its reputation was first established by trials made in the public Hospitals, and its superior efficacy has been well ascertained by the most attentive observation.

In the following pages are contained some very interesting matters of fact, which will throw much light on the choice of this drug, and on the general application of Bark in the cure of Agues and other Fevers. Altho' the general title, by which it was sold, was that of Quinquina, yet it was supposed by our Druggists to be a new medicine. They called it the red Bark; it appears however, both from an attention to its sensible qualities and the information procured from Spain, that it is the true Peruvian Bark, of a quality probably superior to any ever known in this country. This fact is farther proved by its being found sometimes in small detached pieces amongst other Bark, it seems however hitherto to have escaped our particular notice.

The Author highly sensible of the difficulty of establishing facts either on the effects of remedies, or on any branch of medicine which regards the Animal Oeconomy, has solicited the opinion of many ingenious and attentive practitioners, who from their situation have had frequent opportunities of trying the Red Bark.

This

This caution appeared the more necessary, because he is well persuaded that the love of novelty, and too great a credulity in admitting ~~false~~ facts, on very doubtful authorities, have corrupted medicine more than any other Science, and proved more injurious than the most absurd and fanciful theories, the errors of which are easily detected.

Jeffries Square,
June, 25th 1782.

Of its

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[1]

Of its Natural History.

IT is the Bark of a Tree which grows in the neighbourhood of *Loxa* chiefly on the mountain of *Cajanuma*. It is propagated spontaneously. The tree is seldom more than *fifteen* feet high. Its trunk and branches of a proportional thickness. The Bark is carefully cut off in the dry season, and gently dried by the heat of the Sun, before it is packed for foreign use. It has been distinguished into the white, yellow and red, the last is generally preferred, but they are only to be considered as varieties of the same tree, depending on soil, exposure and other accidental circumstances. Perhaps the age of the tree and the size of its branches, from whence the Bark is taken, as well as the care and attention bestowed in the preparing it, may influence its powers and efficacy. I am persuaded

uaded that the Bark of which we are now treating is the "*Cinchona officinalis* Linn. *Sp. pl.* 244 *mat. Med.* 71 *Quinquina De la Condamine Memoir de l' Acad. d. Sc.* 1738 *p.* 226 *t.* 5 *fig. A. E. & t.* 6 *f. F. S.*

The Inhabitants of *Old Spain* always preferred the larger Bark, and from the account of travellers, I am disposed to believe that more attention is paid in collecting and drying the Bark which is consumed in *Spain*, than what is brought to a foreign market. I hope that the information which I shall give on this subject will stimulate Druggists to procure the Red Peruvian Bark, and remove the prejudices which have prevailed against so large a Bark in favour of the small, thin, and quilled Bark, hitherto the subject of their choice.

This Red Bark is very distinguishable from those large coarse woody and fibrous masses, occasionally mixed with the common Peruvian Bark.

Of its

Of its Sensible Qualities.

TH E Red Bark is in much larger and thicker pieces than the common Peruvian Bark. It evidently consists of three distinct layers. The external thin, rugged, and frequently covered with a mossy substance, and of a reddish brown colour. The middle, thicker, more compact, and of a darker colour. In this appears chiefly to reside its resinous part, being extremely brittle, and evidently containing a larger quantity of inflammable matter than any other kind of Bark.

The innermost has a more woody and fibrous appearance, of a brighter red than the former.

The intire piece breaks in that brittle manner described by writers on the *Materia Medica*, as a proof of the superiour excellence of the Bark.

In

In reducing it to powder, the middle layer, which seems to contain the greatest proportion of Refin, will not give way to the pestle so easily as the other layers; this should be particularly attended to when it is used in fine powder. Its flavour is chiefly discoverable either in powder or solution, is evidently more aromatic, and has a greater degree of bitterness than the common Bark.

Of its Chymical and Pharmaceutical History.

EXPERIMENT, I.

To an ounce of red Bark, reduced to a fine powder, were added *sixteen ounces* of distilled water; and, after remaining together *twenty-four* hours in a florence flask, the liquid was carefully filtered. The same experiment was made with the Peruvian Bark commonly in use.

The

The colour of the two infusions was very different, that made with the Red Bark being much deeper. The taste and flavour of the infusion of the red Bark were considerably more powerful than of the other. In the opinion of many Gentlemen who tasted the infusions, the cold infusion of the red Bark was more sensibly impregnated than even the strongest decoction of the common Bark.

EXPERIMENT II.

To two ounces of the cold infusion of the red Bark, were added *twenty* drops of the *Tinctura Florum Martialis*. It immediately became of a darker colour, soon lost its transparency, and after a short time precipitated a black powder.

EXPERIMENT III.

To two ounces of the cold infusion of the common Bark, were added *twenty* drops of the *Tinctura*

Florum Martialium in the same manner as to the other. It retained its transparency some time, and afterwards became of a dark colour, but there was no precipitation from it as from the last.

EXPERIMENT IV.

To an ounce of red Bark, reduced to a coarse powder, were added *sixteen* ounces of distilled water, and after boiling until one half was evaporated, the liquid while hot was strained thro' a piece of linen. The same experiment under similar circumstances, was made with the common Bark. The superiour taste and flavour of the decoction of the red Bark was equally observable with that in the infusion. The decoction of the red Bark, under cooling, precipitated a larger quantity of resinous matter than the decoction of the common Bark. The difference of colour was likewise very distinguishable.

EXPERIMENT V.

To an ounce of red Bark, reduced to a coarse powder, were added *eight* ounces of proof spirit, and, after standing a week together, the Tincture was filtered.

The same experiment, under similar circumstances, was made with the common Bark. The Tincture of the red Bark, both when tasted by itself and under precipitation by water, had more flavour and taste than that of the common Bark.

The Tincture from the red Bark is of a much deeper colour than the other.

EXPERIMENT VI.

To each *residuum* of the above Tinctures were added *eight* ounces of proof spirit, which were infused in a moderate sand heat for the space of *twenty four hours*, and afterwards allowed to remain to-

gether a week, occasionally agitating them. The Tinctures were then poured off, that of the red Bark evidently appearing to be the strongest.

The Tinctures both of Experiments 5. and 6. were by a gentle heat evaporated to the consistence of a resinous extract.

The Extract from the Tincture of the red Bark was of a smooth homogeneous appearance, not unlike the Balsam of Peru, when thickened: The flavour and taste of the original tincture were entirely preserved in it.

The Extract from the common Bark had a very different appearance. It seemed coarse and gritty, and by no means so characteristic of its original tincture.

The quantity of extract procured from the red Bark was considerably more than from the same quantity

quantity of common Bark; but, as the *residuum* of neither was rendered entirely inert, the absolute quantity could not be ascertained. *

EXPERIMENT VII.

A tea spoonful of each of the tinctures, prepared by experiment 5th. was added to two ounces of water: the resinous precipitation from the red Bark was not only more copious, but fell more quickly

* To 26 lb. of red Bark were added 26 Gallons of proof spirit, after remaining together for some time the Tincture was poured off, and submitted to a distillation in a water bath, the quantity of spiritous extract obtained was lb. 12 $\frac{1}{2}$ a quantity of water being poured on the *residuum* of the Tincture, the watery extract obtained was lb. 4.

In another experiment, with lb. 30 of red Bark, treated in the same manner as the former, only lb. 11 $\frac{1}{2}$ of spiritous extract was procured, and lb. 4 $\frac{1}{2}$ of watery extract.

The best Peruvian Bark hitherto in use gives from lb. 6 $\frac{1}{2}$ to 7 $\frac{1}{2}$ lb. of spiritous extract.

quickly to the bottom of the glass than the other, and yet, what remained still dissolved in the water, was infinitely more in the red Bark than the common Bark, so far as we could judge from the taste and flavour of both.

EXPERIMENT VIII.

In imitation of the experiments of my ingenious Friend Dr. PERCIVAL, I added to *two* ounces of the watery infusion of each Bark a few drops of the *Sp. Vitriol. ten.* The acid lost its taste more in the infusion of the red, than in the common Bark, so that there were more obvious appearances of its being neutralized.

EXPERIMENT IX.

A decoction of both red and common Peruvian Bark was prepared by taking an ounce of each and boiling them in a pint and a half of water, to *one* pint;

pint; the former had greatly the superiority in strength and power as mentioned in a preceding experiment. A pint of fresh water was added to each decoction; the boiling still continued 'till that quantity was evaporated. The decoction of the common Peruvian Bark seemed gradually to lose its sensible qualities while that of the red Bark still retained its own.

The same quantity of water was added as before to each, and the decoction repeated untill a gallon of water was exhausted; at the expiration of which time, the common Peruvian Bark was rendered almost tasteless; the red Bark still retaining nearly its former sensible qualities. This experiment proves that the common practice of boiling the Bark is hurt-full to its powers.

The conclusions to which the above experiments evidently lead, are

1st. That the red Bark is more soluble than the Peruvian Bark, both in water and spirit.

2^{ly}. That

2^{ly}. That it contains a much larger proportion of active and resinous parts.

3^{ly}. That its active parts, even when greatly diluted, retain their sensible qualities in a higher degree than the most saturated solutions of common Bark.

4^{ly}. That it does not undergo the same decomposition of its parts by boiling as the common Peruvian Bark.

The advantages therefore to be expected from the red Bark cannot be obtained from any quantity of common Bark. The best common Bark, compared with the red Bark, appears inert and effete.

All the above experiments were executed in the presence of several Gentlemen.

I was led more particularly to prosecute this subject, from an opinion that the red Bark might sufficiently impregnate cold water by infusion, so

as to cure intermittent fevers with more certainty than could be done even by the decoction or powder of common Bark. The sensible qualities which appear from the above experiments, being so much greater, in the cold infusion of the one than in the decoction of the other.

As a proof of the superior antiseptic power of the red Bark, both its cold infusion and decoction preserved entire their bitter and other medicated powers, while the infusion and decoction of the common Bark, prepared at the same time, had altogether lost their sensible qualities. *

D It

* In the month of *June*, a large quantity of the decoction of red Bark, which had been kept for *five* weeks in the Laboratory of GUYS HOSPITAL, was equally good at the expiration of that time, as when first prepared; while a decoction of common Bark, gave evident appearances of a change in a few days.

In the decoction of the red Bark the powder which is separated during the cooling of it, remains intimately diffused thro' Liquor, so that it continues loaded, and turbid while at rest. In the decoction of common Bark, it separates and easily subsides to the Bottom.

It seems reasonable to hope that the introduction of this kind of Bark may be attended with the happiest effects, and enable us to oppose more successfully those malignant and remittent fevers of warm climates, and unfavourable situations, so destructive to our fleets and armies.

Of the general Operation of Bark on the Human Body.

The following remarks are intended to apply to the Peruvian Bark, generally in use; but I am certain that the effects enumerated are found to be produced in a much higher degree by the red Bark.

The cold infusion of Bark seems evidently to promote both appetite and digestion, it increases the tone and action of the stomach, by which the Gas-

tric liquor, the great *Menstruum* of our solid aliment, is more perfectly prepared.

In most cases, the Bark rather promotes costiveness, the common effect of strong and vigorous intestines. In very large doses however it proves purgative, but this effect ceases after a short time.

It renders the pulse stronger and fuller in health, and in most diseases unaccompanied with fever.

In low and malignant fevers, and more especially under remission, it renders the pulse stronger and even slower.

In particular circumstances of fever marked with debility and a tendency to remission, tho' of a very irregular type, it diminishes febrile heat.

It encreases the animal heat and aggravates every Symptom, in fevers accompanied either with much local inflammation, or a general inflammatory diathesis, which is strongly indicated by the pulse the manner of the original attack, the want of due

freedom in the secretions, and the painful and oppressive exercise of every function.

It checks profuse and colliquative discharges, especially those by the skin, while it does not seem to diminish insensible perspiration, or other natural evacuations.

It checks every tendency to putrefaction or gangrene, occurring under circumstances of debility, but it may promote both, if injudiciously employed, while the action of the system is too violent, or the inflammatory diathesis is too prevalent. It seems more reasonable to refer its action, as an antiseptic, to its tonic power on the moving system, than to any primary action on the animal fluids.

Perhaps this doctrine will apply in explaining the history of remedies used in the Scurvy, a disease invited and favoured by every means which can induce debility, and evidently preceded by symptoms of a diminished *vis vitæ* which necessarily lead

to

to others that in a secondary manner only take place in the animal fluids. ¶

It promotes under many circumstances a favourable suppuration and improves the nature of sanious and ichorous discharges.

Its action here can only be explained from its general tonic power, for either general or local debility retards suppuration and favours the obstinacy of ill conditioned ulcers.

Upon the same principle its power of promoting the suppuration, and generation of true pus in the small pox may be explained.

The period of debility is that only in which the Bark should be employed.

I have seen patients under the most confluent Small Pox require Bark in the progress of suppuration,

¶ An Enquiry into the source from whence the symptoms of Scurvy and of putrid diseases arise by Dr. MILMAN.

ation, and yet, in the more advanced state of the disease, the same persons have been saved by the seasonable and repeated use of the Lancet in the secondary Fever, which attacked with fresh rigors and inflammatory symptoms of a true Peripneumony.

In delicate and irritable habits, which seem more especially to favour scrophulous affections, and which produce inflammation of a peculiar nature, that gives way sooner to tonics than evacuants, the Bark has been found the best remedy: This may probably admit of the explanation already given on the subject of Scurvy.

Of its use in the Cure of Intermittent Fevers.

What I have to offer on this subject is the result of careful and diligent observation, totally unconnected

connected with prejudice of any kind, in favour of any particular theory, or a blind attachment to system.

Notwithstanding the cautious and timid practitioner has very generally forbid the use of Bark until evacuations should have been made; I am very well persuaded from observation that in intermittent fevers, such as rage and are endemic, particularly in low and marshy situations, and such as frequently occur on the banks of the Thames, and the lower parts of this metropolis the Bark cannot be given too early, the use of either emetics or purgatives, as preparatory, is not only unnecessary, but in some cases productive of more debility, and therefore to be avoided.

The doctrine of concoction however just it may be in continued fevers, and in some cases of inflammation, does not apply in intermittents produced by the *Miasmata* of low and swampy grounds, and which afford the principal source of agues in the environs of this City.

In

In this opinion I am confirmed by the testimony of Dr. CLEGHORN and others; who frequently found it necessary to give it on the first accession of the disease in order effectually to obviate, or weaken the return of a second paroxysm, which in many cases would inevitably have proved fatal, and Dr. LIND has very properly observed that such symptoms from visceral obstructions, which have been attributed to Bark, are rather the effect of the paroxysm being allowed to return, from the omission of that medicine.

There are many symptoms which would forbid the use of Bark, did they occur distinct and independent of intermittent fever, such as cough, difficulty of breathing and pain in the side: they are frequently brought on by the paroxysm of the intermittent, and only give way to the use of the Bark by which that paroxysm may be prevented. Such symptoms do not admit of a distinct and separate treatment, but are always aggravated by the use of Evacuants, more especially bleeding, the most probable

bable means of relieving in common depuratory fevers.

I have sometimes found a complication of Intermittent and Hætic fever in the same person, and could distinguish between the paroxysms of each: the Bark while it cured the intermittent, has even moderated the Hætic; tho' Hætic fever of itself, especially as a symptom of *Phthisis Pulmonalis* does not appear to give way at any time under the use of the Bark; I think it probable, therefore, that altho' in the treatment of intermittents complicated with other diseases, our chief attention should be first directed to the cure of the intermittent, yet it may be necessary to pursue an indication that may have in view the other disorders, not incompatible with the treatment of the intermittent. In dropries, which accompany intermittents, I have found more benefit from the use of Bark, joined to the neutral salts, and other mild diuretics, than from active purgatives, which always tend to protract the intermittent. Every returning paroxysm

of an ague confirms more and more the cause of that disease which it has produced.

It is not intended to insinuate that no cases do occur, in which it may not be prudent to administer a vomit, especially to persons subject to bilious accumulations in the stomach: but this is more with a view of removing an obstacle to the operation of Bark, than as necessary to render it safe, and I have frequently seen *nausea* and vomiting so much a symptom of the paroxysm, that they gave way only to the free use of Bark itself.

A practice more absurd than that of preceding evacuations has been adopted and recommended. *viz.* that of evacuating by purgatives after the cure had been compleated by the Bark, this seldom fails of bringing back the intermittent, as one cause of inducing debility, the most favourable state of the body for the attack of intermittent fevers.

In persons who are rendered costive by the use of the Bark, I would recommend the common
practice

practice of giving a few grains of Rhubarb, or *Pilul. Ruffi*. If on the other hand it should prove purgative, a few drops of the *Thebaic Tincture* is the usual and best means of checking that operation.

Intermittent fevers are frequently so very anomalous in their appearances and assume so much the character of other diseases that an unskilful, or an inattentive practitioner may be deceived; they however, under any form or any type, generally give way to the Bark; sometimes aided and assisted by other means.

Both the Vernal and Autumnal intermittents of Dr. SYDENHAM yield to it, the latter however sometimes with more obstinacy than the former.

In several cases I have experienced the superior efficacy of the red Bark in removing *Tertians* and *Quartans* which had resisted the common Bark, this however is not to be wondered at, when we consider the diversity in the power even of different kinds of the common Bark in general use.

I hope I shall be excused in digressing so far, as to mention the useful effects I have frequently experienced from the exhibition of Opium in intermittent fevers. We are chiefly indebted for this practice to Dr. LIND. It moderates so effectually the force of the paroxysm by shortening the duration of the cold fit, as well as by diminishing the violence of the hot fit, that I had often flattered myself it was capable of curing intermittents. In this however I was disappointed.

From the experience of it in many hundred cases, I conclude with Dr. LIND. "That an
 " Opiate given soon after the commencement of the
 " hot fit, by abating the violence and lessening the
 " duration of the fever, preserves the constitution
 " so entirely uninjured, that since I used Opium
 " in agues, neither a dropsy nor jaundice has at-
 " tacked any of my patients in these diseases."
 The manner in which I employ it, is either by giving a grain of the *Thebaic* extract upon the accession of the cold fit, or *twenty* drops of the *Thebaic* tincture upon the accession of the hot fit, the ac-
 tion

tion of the former being later from its slower solubility.

The red Bark is so much warmer than the other, that it would seem to answer all the purposes derived from the union of cordials, aromatics, serpentaria and the like so much recommended in the obstinate *Quartan* intermittents of elderly people.

Some difference in opinion has prevailed regarding the manner of giving the Bark. Most practitioners concur in thinking that it cures intermittents more readily when taken in substance than in any other form. In this state, it is both a bulky and nauseous dose in the quantity necessary to cure an intermittent, at any rate, it ought rather to be diffused in some liquid, than given in the form of an electuary or pills, which are sometimes difficultly soluble.

I have found milk cover the taste of Bark and make it more acceptable to children than any other vehicle. The extract of liquorice dissolved

in

in water, may be likewise employed to cover the taste of Bark. Its taste is also corrected by wine, especially by Old Hock.

It would appear from the general preference given to Bark in substance, that its decoction, infusion or tincture are found too weak in any quantity for the purpose of curing intermittents, otherwise as they are much lighter to the stomach and act more quickly, they should be preferred.

I hope to make it appear that in this respect the red Bark has evidently the advantage of any other kind now in use, since either its infusion or decoction will cure intermittents, and that its powder in a much smaller dose than that of common Bark will produce similar effects.

The best time for giving the Bark is in the intermission between the paroxysms and when the stomach is empty. In *Quartan* fevers, where there are two days of *Apyrexia*, we should be particularly desirous of getting down a large quantity on the day

day immediately preceding the approaching paroxysm, and in other intermittents as near the period of the returning paroxysm as the stomach will bear it.

It is unnecessary to limit the dose. One drachm may be given every hour, if the stomach will retain it, and will remove the disease more quickly than a smaller quantity given at longer periods. *

The following facts will best determine how far I am justified in favouring the opinion of the superior excellence of the red Bark.

EDWARD VIRGOE, aged 21, had laboured under an intermittent fever five months. It was first
a *tertian*

* I have likewise frequently adopted the practice recommended by Dr. HOME, of giving the Bark so soon as the sweating fit of the fever has sufficiently carried off the hot fit; this is particularly proper when the interval is short between the paroxysms.

a *tertian* and afterwards became a regular *Quotidian*, accompanied with cough, dyspnœa and hoarseness particularly in the paroxysm. The common Peruvian Bark, given in the dose of one drachm every hour prevented the return of the paroxysm for a few days; the patient however soon relapsed not withstanding the Bark was continued, he was at last cured by taking one drachm of the red Bark every second hour for the space of *ten* days.

It appears from the above case of *Edward Virgoe*, and several others which have occurred to me, that intermittent fevers which had resisted common Bark and other remedies, have yielded to the red Bark, even under very complicated and unfavourable appearances.

In this opinion I am likewise justified by the experience and testimony of many eminent practitioners, and so decided are they in its favour that the demand for it every day increases, especially in some of the neighbouring counties where intermittents are not only more frequent, but more obstinate.

I be-

I began now to suspect that its powers were even sufficient in cold infusion in most cases to cure intermittent fevers, and in all other cases to answer every purpose which might be expected from common Peruvian Bark, in any form in which it had hitherto been employed.

The following facts are sufficient to authorise this opinion.

JAMES YOUNGMAN, aged 16, had laboured under a *tertian* intermittent many months; it was accompanied with a severe cough, and his strength was considerably impaired. He was ordered to take *four* ounces of the cold infusion of the red Bark every *third* hour; after taking it for *two* days the paroxysm did not return. Its use was persevered in *fourteen* days, and he continued perfectly well.

THOMAS PUGH, aged 22, from *Woolwich* in *Kent*, had an intermittent fever of *five* weeks standing of the *Tertian* type, accompanied with a considerable degree of cough, occurring especially in the cold fit, he took the cold infusion, as recom-

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mended

mended in the former case, since which time he had only one slight return of the paroxysm, his cough is likewise totally removed.

JOHN WELDING, aged 25, had an intermittent fever at *Sheerness* for near a year, he took large quantities of common Peruvian Bark without effect. It was of the *Quotidian* type. After taking a cold infusion of the red Bark in the quantity of a quart in *twenty-four* hours for *three* days, the paroxysm disappeared and has never since returned. It proved at first purgative but soon lost that effect. His strength and appetite were greatly improved under the use of the infusion.

The cold infusion employed in the above cases was prepared by pouring a quart of cold water on *two* ounces of the red Bark in fine powder, frequently agitating them for the space of *twenty-four* hours. †

Of

† Tho' the cases above mentioned evidently prove that the cold infusion will cure Agues, yet they are not intended to divert the attention from other more effectual means of giving this Medicine.

Of its use in the cure of other Fevers.

Remittent fevers are frequently equally steady in their periods of remission and accession with those of the intermittent kind; but the *Apyrexia* being less perfect and complete has given rise to many doubts regarding the safety of giving Bark. As remittent fevers are more particularly marked by appearances indicating the prevalence of bile in the stomach; the propriety of giving an *Emetic*, prior to the use of the Bark, seems well ascertained, and the remission is frequently rendered more complete by such a practice.

In the remitting fevers, however, of warm climates, the accession of the paroxysm is so extremely violent, and the strength of the patient so quickly exhausted, that it becomes absolutely necessary to catch the first opportunity of the most trifling remission; and to give the Bark with the same freedom that you would do in common intermittents.

In remitting fevers, the concomitant symptoms are more to be regarded than in intermittents, because they more especially disturb, interrupt, and shorten the periods of remission; even in the warmest climates, and under the severest prejudices, it has been found necessary to take away a few ounces of blood to relieve pain in the head, oppression in breathing, an intense dry heat on the skin, and other symptoms protracting the paroxysm; by such means the remission has been brought on, and the Bark given with more effect.

The fevers of this country seldom have regular remissions, until they have been properly treated by evacuations; the inflammatory by bleeding, and the bilious by vomiting and purging.

When fevers are brought into a state of obvious remission, that is, when the pulse becomes from 10 to 20 slower at some particular time in the 24 hours; when the restlessness, anxiety, and tendency to delirium abate; when the mouth and fauces are moist; when the organs of secretion, and especially the

the skin are more open and pervious, such symptoms of remission admit the use of Bark with the same freedom as in intermitting fevers.

The acute rheumatism, notwithstanding its inflammatory attack, and the appearance of the blood, and although the joints often continue inflamed several weeks, very early assumes the form of a remitting fever.

Under such circumstances, a perseverance in the *Antiphlogistic* plan is generally found to be ineffectual. I have, in several cases of this kind, employed a cold infusion of the red Bark, and the disease seemed to give way only to this treatment.

The acute rheumatism in its remissions assumes the form of a double *Tertian*, and the patient is frequently greatly exhausted by the profuse sweatings which terminate the paroxysm.

It is in such cases that I would particularly recommend the use of Bark. I have found this practice

rice more successful, and it must be allowed to be more rational than the use of *Volatiles* and *Guaiaac*.

It does not appear to me in any degree repugnant to just theory founded on observations made in similar cases, that at a time when the lancet may be used moderately or topical bleeding with more freedom, the Bark may be given so as to obviate the debility of a long and tedious disease, and by keeping up the strength of the system, prevent that torpor and disposition to chronic rheumatism so frequently the effect of the acute.

In that low fever, which HUXHAM has so well described under the title of nervous, I have prescribed the cold infusion of the red Bark with advantage, where the skin hath been soft, and the pulse under one hundred and ten.

In such fevers, it chiefly acts as a cordial in supporting the *Vis Vita*, and for which reason I think it may be given with advantage in the decline of all fevers, even where the symptoms on the attack of the disease were evidently inflammatory.

Almost

Almost every Fever remits in its decline.

Fevers originally putrid and malignant, as arising from *Miasmata* and putrid vapour, very seldom occur in this City, they are most generally to be found in Fleets and in Camps, and in situations where air stagnates or where animal bodies are confined in a close place.

In such fevers, the cure is effected by vomiting and warm cordials, of the last is the red Bark in an eminent degree.

It may be infused in wine, which will render its operation more antiseptic.

It intimately unites with the several acids, from which a very favourable operation in such cases may be expected.

In the putrid fever, attended with a gangrenous sore throat, I have in many instances experienced the efficacy of Bark, but care should be taken

not

not to confound this disease with the *Angina Mucosa* of Dr. HUXHAM, or the *Angina Erysipelatosa* of Dr. GRANT, diseases, tho' contagious and accompanied with *Eruptions* on the skin, evidently of the most inflammatory nature and requiring the use of *Evacuations*.

In Petechial Fevers with symptoms of great prostration of strength, I have frequently seen the pulse not much quickened and the animal heat very little increased. In such cases I would recommend the use of the red Bark infused in Old Hock.

I have seen a Jail Fever with no other distinguishing symptoms than Petechiæ and Debility; the Tongue clean, the pulse moderate tho' small, and the secretions apparently not disturbed. In that case, blisters on the Extremities, Bark and Wine are the best remedies.

In general we find that Fevers marked with symptoms of debility are chiefly found to remit,
and

and therefore they admit of the use of Bark; by increasing the Tone and Vigor of the system, it opposes a returning Paroxysm.

Fevers of more violent action, such as we denominate inflammatory, do not remit at least so obviously, until that action is moderated by Evacuations, so that they chiefly remit only in their decline.

The primary attack of most fevers in this country, is attended with violent action, which is best moderated sometimes by the prudent use of the lancet, but most frequently by the *Tart. Emetic* with the infusion of *Sena* and some of the neutral salts. All fevers beginning with a violent *Rigor*, and followed with great heat, require early evacuations, while such as creep on slowly and imperceptibly in the beginning, with giddiness in the head, rather than acute pain, much anxiety and watchfulness, tremor and debility, give way to Opiates, Bark, *Serpentaria* and Wine. Blisters applied to the arms are extremely useful in keeping up the pulse, especially if

the skin be soft, the tongue and fauces sufficiently moist; much more may be learned by attending to this last appearance than is generally known.

It is necessary, however, to distinguish between the dryness of the tongue and mouth, as a symptom of the fever, and as arising from the circumstance of a patient sleeping with his mouth open.

I hope the observations here offered to the public on the subject of this invaluable remedy, will remove all prejudices against a Peruvian Bark of a large and coarser appearance, than is generally employed.

It is at present in very great demand, the difficulty of procuring it will not, I hope, instigate Druggists and Dealers in the article, to substitute at any time a spurious kind in its room.

Extract

Extract of a Letter from Mr. EDWARD
JACOB, junr. an eminent Surgeon,
at *Feverſham*, in *Kent*.

I HAVE had ſuch repeated opportunities of trying the Red Bark, that I hope to be able to give you every ſatisfaction, you can wiſh, of its ſuperior efficacy over the Bark in common uſe.

Our ſituation being in a country not far diſtant from the marſhes, renders the inhabitants more expoſed to intermittent complaints than thoſe of cities and more inland counties; and, I aſſure you, before the uſe of the Red Bark was known, the Ague, from its particular ſtubbornneſs, (as we then thought, or what we have ſince obſerved from the want of efficacy in the other Bark,) might be truly called, the *opprobrium Medicorum*; but, now I think, that ſtain is entirely removed, for I have not met with one ſingle caſe, where (when I could perſuade the patient to adhere ſteadily to my advice) I have ever found the Red Bark to fail.

The Peruvian Bark, with which I was formerly provided, was of the best kind, and always had in the quill; yet, it was even much inferior in its effects to what ought reasonably to be expected from it.

The first knowledge that ever we had of the Red Bark was in *March*, 1781, when a few pounds was sent us to try its effects; our Druggist informed us that it was then in use at *St. Bartholomew's Hospital*, and was there found effectual. It remained in our house till *May* following, when I was attacked with an Ague; I did not at first think of trying the *new* Bark, for I guessed, by taking of the *old* in great quantity, which would not be disagreeable to me, that my Ague would soon leave me; but, to my great disappointment, it succeeded fit, without shewing the least good effect of the remedy applied. I was then determined to try the *new* Bark; but, finding my Ague stubborn I emptied the *Prima Via* by an Emetic and Carthartic, and immediately, on the fever going off, I took one drachm of the Red Bark in fine powder, mixed with three ounces of the decoction, and a small quantity of the tincture, which
being

being a draught well loaded with Bark, at first seemed to sit uneasy on the stomach; (which I have several times on being first taken, found the case with some of my patients, but which never took from its effect,) but, after resting for some time, I found myself in a state to continue its use. My Ague from that time kept off; till, from omitting the Bark too soon, (and finding myself quite well) in a few weeks after, slight symptoms appeared again; but, which never formed a direct fit, the Bark being again repeated, eradicated the disorder.

My father, now in the 70th year of his age, has since that time been attacked with an Ague; but, from his having been before seized with a chilliness without subsequent fever, suffered himself to have three fits without trying any remedy: being then convinced of the reality of the Ague, applied to this Bark in decoction, with some tincture made of the same; he found it so effectual, that after taking it, the fit did not once return; he omitted the Bark too soon, and had one slight fit; but, after repeating the

the same remedy a few days, it has not since returned, and he is now perfectly well.

The patients, who have received immediate relief from the *new* Bark, are so numerous, that I cannot with any degree of certainty guess the number.

The quantity that we have used, from *July*, 1781, to the present time, is upwards of sixty pounds. The manner in which we have used it, with a view to prevent the return of an approaching paroxysm, is by giving $\frac{1}{2}$ a drachm or 1 drachm of the Powder, mixed with two ounces of the decoction, and a small quantity of the tincture. The decoction we have used, has been prepared by boiling three ounces of the gross powder boiled in two quarts of water to one quart. When the patient has been of a more delicate frame, or when it has been used as a corroborant, we have given the decoction and tincture without the powder. When the Ague has been but recently contracted, we have seldom trusted to any thing but the Bark, but when stubborn, evacuants have

have been first given; half an ounce of the powder has very frequently cured an Ague without evacuants, or more Bark, when the fit was a recent one; we have now entirely left off giving the *old* Bark in any form since we have found so good effects from the Red Bark, and we used the Refin of Red Bark with good success, in many cases, where the Patient could take it only in the form of Pills. I heartly hope the above account will prove satisfactory to you, if not I shall think myself very happy in answering at any time any future enquiries.

I am,

Sir,

With great respect,

Your most obedient

and humble Servant,

EDWARD JACOB, junr.

Feverham, June, 23d 1782.

A

A Letter from Mr. Boyse, an eminent Surgeon and Apothecary, at Sandwich, in Kent.

SIR,

I AM sorry it is not in my power to send you particular Cases of the effects of the Red Bark. Having made no memorandums, I can only say, in general, that it is a much better Kind of Bark, than any I have been able to procure hitherto. Whether the Intermittents have been worse than common, or the Grey Bark has been of inferior Quality, I will not take upon me to determine; but we were all unusually foiled in our attempts to cure that Complaint, till we were furnished with the *New Bark*. I can have no Inducement to give a higher Character of this Drug, than it deserves: but, I do assure you, that, since I began to use it, it has not once failed me, when the Patient has taken it in a proper manner. Hence, I have a firm persuasion of its superior efficacy, and I am the more confirmed in my Opinion, by knowing that my Sentiments correspond with yours,

and

and with those of all my medical acquaintance, in this Neighbourhood, who have made trial of it. My best wishes attend your publication; not only because I am persuaded it will operate to the advantage of Mankind, by extending the knowledge and use of this valuable Medicine, but, likewise because I am in hopes it will hasten a fresh Importation of the Article, of which I have very little left, and I know not where to go for a supply.

I have the Honor to be,

Sir,

Your most obedient Servant,

Sandwich, June 19th, 1782.

W. BOYS.

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In

In addition to the character given of the Red Bark, by several practitioners in the country, is a letter I received a few days ago from Sir WILLIAM BISHOP, an eminent Surgeon, at *Maidstone*, in *Kent*, dated *June 16th*.

IN which he shews, by a variety of cases, that in the cure of intermittents, in that part of the world, the Red Bark had not only been infinitely more effectual than the common Peruvian Bark, or any other remedy usually employed, but that it had radically cured where cold bathing, emetics, opiates, bitters and friction failed, and where the best Pale Bark, both by itself, and with a variety of other medicines, was exhibited without effect, even to the quantity of sixteen ounces. The form he gives it in, is that of an electuary, with the addition of a small quantity of the essential oil of pepper-mint and caraway-seed; and he seldom has occasion, he says, to use more than from 4 to 6 ounces. One case he mentions, where a sphacelus had taken place
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in a malignant fever, accompanied with delirium and every other bad symptom, the patient was recovered by the use of the Red Bark, Anodynes, and Wine; the sphacelus separating kindly, the fever and bad symptoms speedily gave way.

I am likewise favoured with another letter from Sir WILLIAM BISHOP, dated *June 23d*, which contains many sensible and judicious hints upon this subject.

HE recommends the grinding Red Bark into the finest powder by a mill, and afterwards sifting it through the finest cypress sieve, in order that it may sit lightly on the stomach, and that its parts may be uniformly blended together: he observes, that if, after breaking the Bark, you examine the broken pieces, by means of a glass in the sun shine, you will see the resin-like spangles of gold between the internal woody fibres and the outward grey coat; by comparing this appearance with the best Pale

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Bark,

Bark, you will discover that the Red Bark contains a much larger quantity of resinous parts.

Two scruples of Bark, as coarsely powdered as is commonly sold by the apothecaries, will be as disagreeable to take, as a drachm or four scruples finely ground. One drachm is the dose he generally gave to an adult, although he sometimes met with patients, who would choose to take two or three drachms at a dose, and those doses, at longer intervals; and from experience he found that, when this last practice agreed with the stomach, it was the most effectual way of curing the intermittent. One patient took three ounces in twelve hours, and had no return of an obstinate Quartan.

Many Intermittents, which could not be cured by small doses, were removed by larger doses, more frequently employed.

He mentions that a period of *five* or *six* hours, before the expected return of a *Quotidian*, or *Tertian* Intermittent, is all that is necessary for the taking

taking a sufficient quantity of the Red Bark, in order to obviate the approaching Paroxysm. Some have been cured by taking *two* ounces, as quick as possible after the fit, but such as persevered in the use of it, until *four* or *six* ounces were taken acted most prudently, their health was soonest and most perfectly restored. He likewise observes, that such Persons ought to take the greatest quantity of Bark, whose blood is in the most dissolved state, and where the fibres have been relaxed by the most profuse sweating, which frequently takes place in obstinate *Quartans*.

Quotidians require but a small quantity, *Tertians* will yield to fewer doses than our *Kentish Quartans*.

He found it better to get down *five* or *six* ounces of Bark, in eight or ten days, than to allow a larger time for the same quantity. Labouring people, who work out of doors in cold foggy mornings, either in marshy grounds or wet lands, from sun rise till the dew of the evening, and who sweat profusely, and suffer their wet linen to dry on their backs, will not
be

be safe from a return of the quartan fever, with less than five ounces taken after the last fit, as the good effects of all they had taken before, are very probably carried off and dissipated in the ensuing paroxysm.

He likewise observes that the Bark in large doses will not cure the irregular fits of an ague and fever, which so often afflicts persons, when matter is forming in the lungs, in the *Phthisis Pulmonalis*.

The letter from Sir William Bishop, which convey these observations; likewise contain much valuable information on other medical subjects, and I hope the ingenious author will, on some future occasion, favour the public with them.

A letter

A letter from Dr. WITHERING, an eminent Physician, at *Birmingham*,
June 29, 1782.

Dear Sir,

I AM much pleased, that you have undertaken to give us an account of the Red Peruvian Bark. A Publication upon that subject, cannot fail to produce good effects, by removing the prejudices of some, the ignorance of others, and ultimately by exciting our merchants to obtain liberal supplies of a medicine so truly valuable. The universal prevalence of intermittent fevers this spring gave us a large experience of its effects. We have not many intermittents in the town of Birmingham; but, in other parts of the county of Warwick, in Staffordshire, Shropshire, Worcestershire and Oxfordshire, so far as my rides extend, they have been more general than ever known before in the memory of the oldest practitioners I have conversed with.

After

After taking pains to recommend the Red Bark to all the Apothecaries I met with, and consequently not less anxious to learn their observations relative to its effects, I can say that they unanimously concur in asserting "that they have never been disappointed in their expectations when they exhibited it to Patients labouring under Intermittents."

Now the Intermittents which I have seen, have pretty generally assumed the Tertian Type in light soils, and the Quartan Type in clayey countries. Of the latter, I have had the care of some which were from 6 to 18 Months duration, originating in *Kent* and *Essex*. I have known two instances only of Quartans in which the Red Bark did not prevent a recurrence of the Fits; I saw one of these patients afterwards; he laboured under Hepatic and anasarcaous symptoms, these were removed in a fortnight by the usual methods, and then the Bark effected a cure. The other case was at a considerable distance from this place, and I have not yet learnt its termination.

It

It will require some farther experience to ascertain the *necessary* doses. I know some practitioners who have given one or two drachms every four hours betwixt the fits, but I have never had occasion to give more than thirty or forty grains at similar intervals of time.

As to its preparations I can say but little; preferring always in my own practice the simple powder; but, I am told, that it makes a very rich tincture, and, I have seen decoctions of it very high coloured and turbid.

But it may be asked—would not the common or Quill Bark, have produced similar good effects in the intermittents of the present year? From the reports of other practitioners; I believe it would not. From my own experience, I can give no other answer, to such a question, than, by saying, that after frequent and almost continual disappointments, from the use of common Quill Bark, I have not tried to cure a single intermittent with it for more than seven years past; relying en-

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tirely

tirely upon the use of evacuants, opium and metallic salts. To render this last assertion reconcilable to the daily experience of others, it may be necessary to observe, that with us, a Physician is seldom consulted in fevers of the intermittent kind, unless some unusual appearance, or some uncommon obstinacy in the recurrence of the attack, alarms the patient or his friends.

Whether the medicine in question, be the product of the same tree from which the Quill Bark is derived, may be difficult to determine, but I am persuaded it is the medicine that was used by MORTON and SYDENHAM, or its efficacy could never have been so proverbial. I know not what could first induce the writers upon the *Materia Medica*, to prefer the Quill Bark; but, I know if you were to ask an *English Tanner*, whether the Bark from the trunk; or, that from the twigs of the Oak is the strongest, he would laugh at your ignorance.

I communicated the contents of your letter, to my worthy friend and colleague Dr. ASH, together
with

with my opinion upon the subject: he authorises me to say that the result of his experience perfectly coincides with mine.

I remain,

With the truest esteem,

Yours,

W. WITHERING:

P. S. Thus my good friend, have I freely communicated my sentiments and observations upon the subject you have in hand. You are at liberty to make what use you please of them, and I shall think myself happy in having contributed a little towards the extensive usefulness of your design. I have seen no bad effects from it, notwithstanding the reports of some of the *London* Druggists; but, their motives were too evident to need a comment.

I feel, with you that distance alone has interrupted our communications; but, I feel too, that dis-

tance can never abate the regard with which I once
more subscribe myself,

Affectionally,

Yours,

W. W.

To Dr. SAUNDERS, *Jefferies Square.*

A Letter from Mr. SHERWIN, an ingenious Surgeon, at *Enfield.*

SIR,

SINCE we have used the Red Peruvian Bark, we have had great success in curing Agues and intermitting Fevers. These disorders returned so frequently after the use of the best Peruvian Bark, which we could formerly procure that our credit, as
well

well as that of the medicine, began to fail very much, and numbers of our patients got into the hands of persons unacquainted with physic. They seemed willing to trust rather to *nostrums* and *charms*, than to a medicine which they have seen so repeatedly fail, and to the effects of which they very ingeniously ascribe every ache and pain which continue after Agues, or which are the consequences of Agues when imperfectly cured.

I could give a very ample detail of the inefficacy of the common Bark; but, as the complaint is general, it would be unnecessary. I shall therefore, only take the liberty to present you with the more agreeable history of a few cases that have immediately yielded to the Red Peruvian Bark, and that even when given in very moderate doses, after having obstinately resisted large quantities of the other.

RICHARD PARSLEY, a hard working young man, about 28 years of age, was seized with an Ague last autumn; which continued either as a *Quotidian*,
Tertian

Tertian or *Quartan*, with very little intermission, till the 20th of *April* last, when I saw him accidentally. He gave me the following account. That he had taken every thing that had been recommended to him; and that his master, a worthy and respectable gentleman in this neighbourhood, had procured him the advice of different practitioners of physic, who had prescribed Bark for him in large quantities, but without benefit, as the disorder always returned with greater violence after it had been check'd a few Days. He added, that the last medicine, which he had been advised to take, was half an ounce of alum boiled in a pint of ale, to half a pint, which he was ordered to repeat three different times, as soon as he felt the Ague approach. He had in this way, he said, taken seven half ounces upon the approach of as many different fits of the Ague.

I suspected, that so large a quantity of alum, taken at one dose, must have produced some dangerous effects, and doubted whether he had swallowed the whole of it; but, I found upon more particular enquiry, that he really swallowed half an ounce each
time

time; as he says, that he stirred it up from the bottom and felt it gritty in his Teeth. It gave him great pain in his stomach. So large a quantity of Alum being taken at one dose, without materially injuring the system, is a fact, which I am persuaded you will think worthy of notice.

I took compassion upon this poor Fellow, and sent him 8 papers of the Red Peruvian Bark, containing a drachm in each, which he finished in two intermediate days, the disorder being then a Quartan. It is now seven weeks since he took this medicine, and he has had no return of the complaint, but to use an expression of his own "hath felt ever since as if he had a new Inside."

ANNE PICOT, a poor Girl 14 years old, has been afflicted with an Ague since Autumn last in the same Family with PARSLEY, and has also tried various medicines without effect. I prescribed small doses of the *Vitriolum Cærul.* fourteen days without gaining any advantage. I gave her also 3 or 4 doses of a hot aromatic powder recommended by

by Van SWIETEN consisting of Bay Berries and China Pepper which I have frequently seen to cure, but she found no benefit from it. I cannot say whether this Girl had given the common Bark a fair trial. She begged to have some of the same medicine that cured her Relation, and about a month since had three papers, containing only one scruple in each, and, I assure you, she has been perfectly free from the complaint ever since.

Mr. BARNES, a very strong hard working Man, was seized last Autumn with a very violent intermitting Fever, attended with Delirium, and apparently much danger. After three or four paroxysms I removed the disorder by giving him one drachm of the best common Peruvian Bark every Hour, and continuing the same quantity twice a day afterwards; but, at the end of fourteen days, the Fever return'd with the same violence as before, and was again stop'd by the same quantity of Bark. From Autumn till the beginning of last April, it returned in this manner (at the end of
about

about fourteen days from the time it was stopped) five or six times and always with uncommon violence. The common Peruvian Bark newly powdered was repeatedly given.

In the beginning of *April*, I prescribed six doses, of the Red Peruvian Bark, of one drachm each, which he took upon the going off of the *Paroxysm*, and I have the pleasure to inform you, that, he has had no return since that time ; though I no longer used the precaution of continuing the daily use of the same medicine.

It is not worth while to mention common cases, where the Red Bark hath cured without the other having had the trial. A few have occurred, and I have not yet had any instance of a relapse.

I was lately called to a very severe case, like that of Mr. BARNES, where the intermission was not longer than 6 or 8 hours. I prescribed, and the patient took 6 drachms of the Red Bark, without interrupting the paroxysm, which came at the

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expected

expected hour; and during the sickness and horripilation the Bark seemed to be entirely rejected by vomiting; however the succeeding paroxysm abated something of its fury. My patient was extremely averse to Bark in every shape; but by deceiving him, during the following intermission, I got him to swallow two drachms at once, which rendered him so entirely averse to the medicine, that he would take no more afterwards. However, to his great joy, and my surprise, the fever left him. He ascribes his cure to three or four draughts of camphorated julep, which were prescribed as a *placebo* upon his refusing to persevere in the use of the Bark. But it may with more justice be ascribed to the two drachms of Red Bark, taken at one dose; as I think the first six were in a great measure lost.

I consider the Red Peruvian Bark as a valuable acquisition to the *Materia Medica*: or, perhaps it may be only a restoration of what was used in the days of SYDENHAM, and some time after, when it was common for medical writers to say, that this, or that medicine would cure, with as much certainty as

Bark

Bark would an Ague. An eulogium to which the Bark in this country has not been of late years entitled.

Before I became acquainted with the superior efficacy of the Red Peruvian Bark, I had tried a variety of *tonics*, with very indifferent success in general, but now and then with very happy effects, such as the *Cuprum Ammoniacum*, *Vitriolum Caruleum*, *Sal Vitrioli*, *Sal Martis*, &c.

WILLIAM KING, an athletic young man, applied to me last autumn, on account of a tedious irregular intermittent, complicated with acute fixed pain in the side, and a full strong pulse, much cough and hoarseness. Under these circumstances, I thought it imprudent to administer the Bark in any Form and had recourse to a plentiful bleeding, applying blisters to the part affected, and giving the *Decoct. Taraxac.* with *Tart. Solubile*, and honey in large quantities. The disorder was clearly an Ague; but attended with symptoms that threatened a pulmonary consumption. His blood was re-

markably fizy, which induced me to make use of *venesection* four times, which with the above medicines, and a very strict *antiphlogistic* regimen, removed the cough and pain in the side, though the Ague still continued. I ventured at last to give him eight doses of common Bark, one drachm in each, which removed the Ague several weeks, and mended his habit much. A continuance of the Bark, twice a day, for sometime after the Ague stopped, brought on a frequent bleeding at the nose.

The Ague returned twice during the winter; but gave way soon to the same Bark, and he kept tolerably well till the setting-in of cold north-east winds in spring, when his Ague again returned, and brought with it the pain in the side, a bloated icteric countenance, much hoarseness and cough. After one more bleeding and the use of the *Apozem* for a month, I gave him six drachms of the Red Peruvian Bark in *April* last, and have had the pleasure to see him continue free from the Ague since that time, though he never repeated the dose after it stopped.

I was

I was unwilling to persist in the use of the Bark after the Ague stopped lest it should encrease the circulation too much and again excite a bleeding at the nose.

I have now indeed almost entirely laid aside the custom of persevering in the use of the Bark after the intermittent is stopped. I have for sometime suspected that it answers no good purpose, and that it may possibly now and then be the reason why large quantities of good Bark have been given in vain. It is a well known Fact, that every species of intermittent complaint frequently returns in fourteen days after being interrupted by means of Bark, notwithstanding that medicine is continued every day. May not the daily use of Bark so habituate the constitution to its effect as to render it useless when the Intermittent returns?

I am now satisfied when I have put a stop to the expected paroxysm, and prescribe an anodyne to be in readiness if ever the cold fit returns, advising my patient to have recourse to the same quantity of
Bark

Bark which he found necessary at first, and to take it as soon as the succeeding fever abates. I adopted this practice a little time before I became acquainted with the superior efficacy of the Red Bark, and thought it an improvement, but since that time I have succeeded so well by giving six or eight drachms between the paroxysms that I have seldom had occasion to repeat a single dose.

I am,

Sir,

With great respect,

Your obliged and

most obedient Servant,

JOHN SHERWEN.

Endfield, June, 23d 1782.

A Letter

A Letter from Dr. FOTHERGILL, an
 eminent Physician, in *Harpur Street*.

Dear Sir,

IN answer to your obliging request, I shall now proceed to lay before you, the best information I can concerning the New Bark, lately introduced into practice, under the name of CORTEX RUBER OR RED BARK. As it was found on board a Spanish prize intermixed with a small quantity of common Peruvian Bark, it would seem to be no other than the produce of the trunk or large branches of the same tree. It seems to be possessed of the same sensible qualities only in a much higher degree, hence it yields a much larger proportion of resinous extract, and gives a more saturated tincture, and decoction than the common Bark. Hence too I have found (according to what you lately observed) that the decoction may be exposed a long time to the open air, without contracting the degree of acidity, which manifestly takes place in that of the common Bark in a few days.

It

It has been remarked for many years past, that the Peruvian Bark has often disappointed the expectation of the public ; having fallen greatly short of that high degree of efficacy, for which writers of the last century, have so highly extolled it. Few Physicians of extensive practice, but must sometimes have had the mortification to observe their favourite specific entirely baffled by a regular intermittent, without being able to assign any probable cause of the defeat, except the *ungenuineness* of the medicine ; Whence it would seem to follow, either that the intermittents of late years, have been more *obstinate* in their nature, or that the Bark has been of an *inferior quality* to that which was used by Dr. SYDENHAM, and many of his respectable contemporaries, of whose veracity we can entertain no reasonable doubt. The latter appears to me to be the more probable, especially when it is considered that of late years, it has been customary (for what reason I cannot imagine) to select the Bark of the small branches, under the denomination of *Quilled Bark*, in preference to that of the trunks. Should this preference hereafter be discovered to have been

ill

groundless, (agreeable to what I have long suspected) it may perhaps contribute to explain the principle cause of our disappointments. In the art of tanning, experience has long determined in favour of large Oak Bark, as being greatly preferable to that of the smaller twigs. Why the reverse of this should take place in a medicinal view, is by no means evident, especially if the virtue of the Peruvian Bark keeps pace in any degree with its astringency.

Spanish practitioners, as I have been lately informed, are so well convinced of this, that they always prefer the large Peruvian Bark; separating it from the smaller sort, for all important purposes, of which the late capture indeed seems to afford a proof.* Future observations may probably discover that this was the real genuine Bark, with which our ancestors cured all the various kinds of Intermittents,

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* This must not however be confounded with those coarse woody flakes, which constitute a large proportion of the worst kind of Bark, now in use. For these, having been already stripped of the outer rind, consist of a mere ligneous substance divested of resin, and consequently of medicinal virtue,

tents, with a degree of certainty, which now affords their successors.

If Bark taken from the large branches should be found to be more efficacious than that of the small, is it not reasonable to believe, that, that of the trunk, or rather of the root, might surpass both in virtue? Political reasons, however, respecting the preservation of the trees, which produce so important an article of commerce, will, it is to be apprehended effectually deter the inhabitants from every experiment of this nature.

A very eminent Druggist, who purchased a large share of the above cargo, assures me, that many of the Apothecaries whom he has supplied with the Red Bark, and who have carefully compared its effects with those of the common *cortex*, make no scruple of deciding in its favour. He further adds that the demand for it has increased so rapidly of late, that the stock in hand is already nearly exhausted.

It is to be regretted that the passion for interlard-
 ing this simple febrifuge with other bitters and as-
 tringents (after the usual mode of practice) but
 still too much prevails! Under this false idea of ad-
 ding to its efficacy, its virtue may often be greatly
 diminished, and at all events, the result of the trial
 must be rendered extremely equivocal. In justice
 to the remedy, and to obviate this uncertainty
 concerning its effects, I have embraced every op-
 portunity (which so short a space would admit,) of
 administering it in its simple state, without intermix-
 ing it with other medicines. The cases in which I
 have chiefly tried it, have been low putrid Fevers,
 attended with extreme prostration of strength, deli-
 rium during the evening exacerbations, with short,
 and obscure remissions in the day time. In one in-
 stance of this kind, *Petechiæ* appeared, and were suc-
 ceeded by a *nasal hæmorrhage*, which generally re-
 turned with the exacerbations, till the patients
 strength seemed to be nearly exhausted, accompa-
 nied with cold sweats, and involuntary twitchings,
 &c. His narrow escape from this most critical situa-

tion, I attribute to a liberal use of this Bark, and acidulated liquors drank copiously. From its success in this, and several other instances, which have fallen under my own observation, I am strongly inclined to believe that it will soon become an object worthy of attention, but must decline, giving a decisive opinion concerning its superiority, till I know the result of a variety of cases, in which it is now under trial, and also receive additional confirmation from such correspondents, as are less prepossessed in its favour than myself, because they may be supposed to prove in reality more impartial judges. Therefore in the interim, I shall wait with impatience for your intended publication, hoping that by thus collecting the sentiments, and observations of several practitioners in different parts of the kingdom, we may at length be enabled to ascertain the true comparative merit of the *Red Bark*, which cannot but afford great satisfaction to the public at large, as well as to,

SIR,

Your most obedient servant,

A. FOTHERGILL.

Harpur-Street, July 6th, 1782.

P. S.

P. S. A detail of particulars has been purposely omitted in order to avoid unnecessary *prolixity*, especially as similar cases occur almost daily. It ought, however, to have been mentioned that *common Peruvian Bark* had been *prescribed* for WILLIAM HENTON (the person who laboured under the petechial Fever, and hæmorrhage, as above described) before I saw him, and that his case was pronounced to be *desperate*. I have now the further satisfaction to add that on my entering his room this day, (*July 12th*) he assured me, with a joyful countenance, that since he had taken the Red Bark (or as might now perhaps with more propriety be said the *Real Bark*) he had suffered no symptoms of relapse, and that he remains perfectly free from all complaints, except a little weakness of sight. It may not be improper to add, that I have generally administered it in substance, from two scruples to a drachm, every two hours, except during the paroxysm or midnight exacerbation, when it has been cautiously avoided. Because I have long been convinced by experience, and attentive observation, that the febrile symptoms are commonly exasperated whenever
common

common Bark is taken at that period. If the Red Peruvian Bark should be found to answer completely, and that in smaller doses, it will be extremely interesting to the Patients, and no less pleasing to the Physician especially when he can with confidence pronounce,

"Hi motus, atque hæc certamina tanta,

"*Pulveris Exigui jactu compressa quiescunt.*"

VIRGIL.

I Hope, I shall not be considered as presumptuous, in concluding that the foregoing observations are sufficient for determining the superior efficacy of the Red Peruvian Bark.

I can not however finish without returning my best thanks to the Gentlemen who have favoured me with their correspondence; and I think it necessary to express my obligations to many Gentlemen, whose letters were too late for publication.

They all concur in recommending the Red Peruvian Bark, as more efficacious and powerful than any other kind.

From

From the numerous tryals I have made with it, in Intermittent Fevers, and other diseases, I am disposed to conclude that it need be employed only in half the quantity we generally recommend of other Bark.

I have likewise the satisfaction of assuring my Readers, that it is now in general use in all the large Hospitals in *London*; and, such is the preference given to it, that the demand is difficultly supplied.

Be careful in the choice of it, by attending to the characters which distinguish it from the large Bark, hitherto rejected by our Druggists.

I shall continue to be diligent in my enquiries on the subject, and I most earnestly request the favour of my Friends that they will persevere in supplying me with accurate observations, so as to determine, with precision, in what other diseases this valuable remedy may be used with safety and advantage.

The operations and effects of remedies can only be ascertained by the united industry and experience.

ence of intelligent men ; who, by being aware of the difficulty of making observations, are sufficiently guarded against the fallacy to which they are unavoidably exposed.

F I N I S.

MEDICAL LECTURES AT GUY'S HOSPITAL.

IN the beginning of *October* next, DR. SAUNDERS, PHYSICIAN TO GUY'S HOSPITAL, will begin his LECTURES, as usual, on the THEORY and PRACTICE of MEDICINE, in which, the chief Objects of Discussion will be the *History, Diagnosticks, Nature and Cure of Diseases.*

At the same Place, and about the same Time, DR. KEIR, PHYSICIAN TO ST. THOMAS'S HOSPITAL, will begin his LECTURES ON CHEMISTRY, in which, while the Principles of that Science are taught by reasoning and Experiment, the Practice of it may be learned from the numerous Processes carried on in the Elaboratory of the Hospital.

DR. KEIR will also begin his LECTURES on the MATERIA MEDICA, about the same Time.

CLINICAL LECTURES are likewise delivered at GUY'S HOSPITAL, on the Cases of Patients, by means of which the Student may enjoy every Advantage, that actual Practice can afford, in the Study of his Profession.

Each of these Courses continue *Four Months* ; they are all carried on at the same Time ; and are repeated *Three Times* in the Year, beginning in *October, February* and *June.*

To accomodate these Lectures to the Gentlemen who attend the Practice of the Hospitals, Care is taken that they shall not encroach on the Hours appropriated to the Transaction of the Hospital Business.
